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Koji Okomori

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EXAMINER

BAREFORD, KATHERINE A

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/501,399	<b>Applicant(s)</b> OKOMORI ET AL.	
	<b>Examiner</b> Katherine A. Bareford	<b>Art Unit</b> 1792	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 April 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5-7 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-7 and 19-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. The amendment of April 20, 2009 has been received and entered. With the entry of the amendment, claims 1-4 and 8-18 are canceled, and claims 5-7 and 19-24 are pending for examination.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 5-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

(A) Independent claim 5 was previously amended to provide that the “coating color is applied by a gate roll coater” (amendment of April 13, 2007). More details of the gate roll coater are added in the amendment of November 21, 2007. However, the only reference to a “gate roll coater” in the disclosure as originally filed is in reference to providing base papers precoated with materials by gate roll coaters, among other coating methods, to be used in the present invention (page 12, lines 12-16 of the

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specification). However, this reference does indicate that applicant was aware of gate roll coaters and could have claimed them or used the terminology of "gate roll coater" as to the present invention if it had been desired. Applicant further argues at the REMARKS section of the November 21, 2007 amendment that the described use in the specification of an applicator roll, an inner roll and an outer roll is a gate roll coater as known in the art, citing pages 192 and 193 of a Japan Technical Association document as to this effect. The Examiner has reviewed this material, however, it does not provide evidence that the described roller system in the specification must be a gate roll coater. The Figure 4.31 KCM roller, for example, has a three roll system with an inner roll, outer roll and applicator roll (on each side of the paper). Thus, this transfer roll set up reads on the transfer roll described in the specification. While a gate roll coater as shown in figure 4.34 can be a three roll system, there is no indication that that is the only type of multi (or three) roll coater system usable to print paper, as again shown by the figure 4.31 system. The Examiner also notes the previously cited Massey patent (US 2185859) also has a three roll system. Arguments about the relative size and speed of the rollers are not supported by what is described in the specification with regard to the use of transfer rollers (page 4, page 13 of the specification). Therefore, there is no support in the disclosure as originally filed for using a specific "gate roll coater" and there is further no requirement that a system with an applicator, inner and outer roll is necessarily a "gate roll coater". As a result, the specific claiming of a "gate roll coater" is new matter.

In the amendment of April 20, 2009, applicant further argues that the specification as whole teaches to one skilled in the art the use of a gate roll, indicating at page 12, lines 12-16 of the specification references gate roll coaters for precoating base papers, and thus one skilled in the art would recognize that a gat roll coater can be used for applying the coating color as in the present invention. The Examiner disagrees with applicant's position. The fact that gate roll coaters were previously referenced in the specification indicates that applicant was aware of gate roll coaters and could have claimed that or used the terminology of "gate roll coater" if it had been desired or planned that the specific use of "gate roll coater" was part of the actual invention. Applicant further argues that the transfer roller on page 13 of the specification is inherently a gate roll coater; and has provided a TAPPI article that appears to indicate that it is known to use a gate roll coater to apply coatings to paper. The Examiner has noted this usage, however, while it may be obvious to apply the coating as claimed by a gate roll coater, it is still not supported by the present application itself that a gate roll coater must be used. As previously discussed above, other coaters can be used that read on the transfer roller of page 13, and therefore, there is no showing that one of ordinary skill in the art reading this application would understand that the transfer roller must be a gate roll coater (that is, that the transfer roller is inherently a gate roll coater).

The other dependent claims do not cure the defects of the claims from which they depend.

4. The rejection of claims 19-24 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn due to the amendment of April 20, 2009 changing "transfer paper" to "base paper" in claim 19.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wurster et al (US 6197155).

Claim 19: Wurster teaches a method for producing coated paper for printing. Column 1, lines 3-5. The coated paper is for offset printing. Column 1, lines 3-5. A coating color containing a pigment and an adhesive (binder) is applied to a base paper. Column 2, lines 50-65 and column 3, lines 5-15. The coating color application method can be roll coating methods such as the Massey coater (which is inherently a transfer roll coater method) or a metering size press. Column 4, lines 20-30. The coating weight can be 7 g/m<sup>2</sup>. Column 4, lines 40-45. The coating color contains adhesive (binder) in an amount of 3-18 percent by weight (3-18 parts by weight of the pigment). Column 3, lines

5-40 and column 6, lines 43-50. This overlaps with the claimed 5-50 parts by weight, and In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). The coating color can further contain, for example, 1 wt % polyvinyl alcohol (PVA) in relation to coating pigment (1 part by weight PVA to 100 parts by weight of the pigment). Column 2, lines 60-65 and column 6, lines 43-45 (the range of 1-4%, column 2, lines 60-65, for example, overlaps with the claimed 0.1 to 1.0 range, and In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)). The polyvinyl alcohol can be in addition to other adhesive, and thus serves as an auxiliary to the extent claimed. Column 2, lines 55-68 and column 3, lines 20-40. The amount of starch present can be 0 percent, thus providing less than 2.0 parts by weight of starch as an adhesive. Column 3, lines 30-40 (and the range of starch can be 0-10 weight percent, which overlaps with the claimed 2.0 wt% or less, and In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)).

Claim 20: the coating color can be 18 weight percent adhesive (binder) in relation to coating pigment (18 parts by weight of adhesive based on 100 parts by weight of the pigment) or less, from the optimization of the range given. Column 3, lines 10-25.

Claim 21: the starch can be considered part of the adhesive (binder). Column 3, lines 15-25.

Claim 22: the adhesive can be styrol (the Examiner takes Official Notice that this is another term for styrene)-butadiene (thus is styrene-butadiene). Column 3, lines 15-20.

Claim 23: the coating color can be 65 weight percent solids, for example, from the optimization of the 30-65 wt% given, as In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). Column 4, lines 20-25.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wurster as applied to claims 19-23 above, and further in view of Japan 11-050392 (hereinafter '392).

Wurster teaches all the features of this claim except that the transfer roll coater has an inner roll, an outer roll, and applicator roll, the coating speed of 1000 m/min or more, the peripheral speed of the inner and outer roll to the applicator roll is 50-95%, and the application without misting or boiling

However, '392 teaches that when making coated paper for offset printing by coating with pigment and adhesive, it is desirable to use a gate roll coater with an applicator roll, an inner roll and an outer roll. See the abstract. Furthermore, it is desirable for the inner and outer roll speed to be 50-80% of the applicator roll. See the



abstract. The adhesive can include polyvinyl alcohol. Paragraph [0017]. The coating speed can be 1200 m/min. Paragraph [0026].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wurster to use a gate roll applicator system and coating speed of 1200 m/min, for example, as suggested by '392 with an expectation of providing a desirable and speedy transfer roll coating system because Wurster teaches that roller application systems can be used (not limited to Massey coater, column 4, lines 20-30) to apply a coating system of pigments and adhesive to a paper surface and '392 teaches that a desirable roll coating system for applying a coating system of pigments and adhesive to a paper surface includes gate roll coaters and that such a gate roll coater would use an inner, outer and application roll and that desirable coating speeds for such systems would be 1200 m/min. Furthermore, it would have been desirable to use such a system with a peripheral speed ratio of the inner/outer roll to the applicator roll of 50-80% as suggested by '392 as a desirable speed ratio when using such a gate roll system. As a result of providing the claimed coating conditions and coating material features, the misting and boiling would also be prevented, as the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

8. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wurster et al (US 6197155) in view of Hayasaka et al (US 5972167) and Japan 11-050392 (hereinafter '392).

Claim 5: Wurster teaches a method for producing coated paper for printing. Column 1, lines 3-5. A coating color containing a pigment and an adhesive (binder) is applied to a base paper. Column 2, lines 50-65 and column 3, lines 5-15. The coating color contains, for example, 1 wt % polyvinyl alcohol (PVA) in relation to coating pigment (1 part by weight PVA to 100 parts by weight of the pigment). Column 2, lines 60-65 and column 6, lines 43-45 (the range of 1-4%, column 2, lines 60-65, for example, overlaps with the claimed 0.1 to 1.0 range, and In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)). The coating color application method can be roll coating methods such as the Massey coater (which is inherently a transfer roll coater method) or a metering size press. Column 4, lines 20-30. Moreover, Wurster teaches that the resulting paper is essentially independent of the type of coat application process. Column 4, lines 25-35. The coating weight can be 7 g/m<sup>2</sup>. Column 4, lines 40-45. The coated paper is for offset printing. Column 1, lines 3-5. The polyvinyl alcohol can be in addition to other adhesive, and thus serves as an auxiliary to the extent claimed. Column 2, lines 55-68 and column 3, lines 20-40. The amount of starch present can be 0 percent, thus providing less than 2.0

parts by weight of starch as an adhesive. Column 3, lines 30-40 (and the range of starch can be 0-10 weight percent, which overlaps with the claimed less than 2.0 wt%, and In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)).

Claim 6: the coating color can be 18 weight percent adhesive (binder) in relation to coating pigment (18 parts by weight of adhesive based on 100 parts by weight of the pigment) or less, from the optimization of the range given. Column 3, lines 10-25.

Claim 7: the coating color can be 20 g/ m<sup>2</sup> total weight, on both sides, with the coating mass spread roughly uniformly on both coat applications, thus providing roughly 10 g/ m<sup>2</sup> on each side of the base paper, which is more than 7 g/ m<sup>2</sup> on each side. Column 4, lines 45-55.

Wurster teaches all the features these claims except that a “gate roll coater” system is used (with application, inner and outer rolls), the coating speed of 1100 m/min or more, and that the peripheral speed of the inner and outer roll to the applicator roll is 50-95%.

However, Hayasaka teaches that it is well known to use transfer roll coating processes to apply coating color (of pigment and adhesive) to a paper substrate to provide desirable paper for printing. Column 6, lines 5-30, column 7, lines 10-15 and column 3, lines 30-35. Hayasaka teaches that desirable transfer roll coating processes include metering size press coaters and gate roll coaters. Column 6, lines 30-35. The

gate roll coaters are described as using two gate rolls (which would provide an inner and an outer roll) to supply coating color to the applicator roll. Column 6, lines 30-45.

Hayasaka further teaches that the relative speed of the rolls in the gate roll coater system are controlled to provide desirable metering and application of coating.

Column 6, lines 30-60. The gate roll coater system can be used to apply coating weight of 5-15 g/m<sup>2</sup> per side. Column 6, lines 45-65. Hayasaka further teaches to use coating speeds of about 600 to about 1500 m/min, preferably between about 1000 and about 1500 m/min. Column 7, lines 1-5.

However, '392 teaches that when making coated paper for offset printing by coating with pigment and adhesive, it is desirable to use a gate roll coater with an applicator roll, an inner roll and an outer roll. See the abstract. Furthermore, it is desirable for the inner and outer roll speed to be 50-80% of the applicator roll. See the abstract. The adhesive can include polyvinyl alcohol. Paragraph [0017]. The coating speed can be 1200 m/min. Paragraph [0026].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wurster to use a gate roll applicator system and coating speed of 1100 m/min or more as suggested by Hayasaka with an expectation of providing a desirable and speedy transfer roll coating system because Wurster teaches that roller application systems can be used (not limited to Massey coaters) and that metering size press systems can be used to apply a coating system of pigments and adhesive to a paper surface and Hayasaka teaches that a desirable roll coating system

for applying a coating system of pigments and adhesive to a paper surface includes gate roll coaters and metering size presses and that such a gate roll coater would use an inner, outer and application roll and that desirable coating speeds for such systems would be about 1000 to about 1500 m/min, and as to the specific speed of greater than 1100 m/min, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). It would further have been obvious to modify Wurster in view of Hayasaka provide that the peripheral speed of the inner and outer roll to the applicator roll can desirably be 50-80% of the applicator roll as suggested by '392 with an expectation of providing a desirable and speedy transfer roll coating system because Wurster in view of Hayasaka suggests gate roll coating of paper with pigment and adhesive for offset printing with Hayasaka teaching that the relative speed of the rolls in the gate roll coater system are controlled to provide desirable metering an application of printing and '392 teaching gate roll coating of paper with pigment and adhesive for offset coating and that it is desirable for the inner and outer roll speed to be 50-80% of the applicator roll.

9. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wurster et al (US 6197155) in view of Japan 11-050392 (hereinafter '392).

Claim 5: Wurster teaches a method for producing coated paper for printing. Column 1, lines 3-5. A coating color containing a pigment and an adhesive (binder) is

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applied to a base paper. Column 2, lines 50-65 and column 3, lines 5-15. The coating color contains, for example, 1 wt % polyvinyl alcohol (PVA) in relation to coating pigment (1 part by weight PVA to 100 parts by weight of the pigment). Column 2, lines 60-65 and column 6, lines 43-45 (the range of 1-4%, column 2, lines 60-65, for example, overlaps with the claimed 0.1 to 1.0 range, and In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)). The coating color application method can be roll coating methods such as the Massey coater (which is inherently a transfer roll coater method) or a metering size press. Column 4, lines 20-30. Moreover, Wurster teaches that the resulting paper is essentially independent of the type of coat application process. Column 4, lines 25-35. The coating weight can be 7 g/m<sup>2</sup>. Column 4, lines 40-45. The coated paper is for offset printing. Column 1, lines 3-5. The polyvinyl alcohol can be in addition to other adhesive, and thus serves as an auxiliary to the extent claimed. Column 2, lines 55-68 and column 3, lines 20-40. The amount of starch present can be 0 percent, thus providing less than 2.0 parts by weight of starch as an adhesive. Column 3, lines 30-40 (and the range of starch can be 0-10 weight percent, which overlaps with the claimed less than 2.0 wt%, and In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)).

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Claim 7: the coating color can be 20 g/ m<sup>2</sup> total weight, on both sides, with the coating mass spread roughly uniformly on both coat applications, thus providing roughly 10 g/ m<sup>2</sup> on each side of the base paper, which is more than 7 g/ m<sup>2</sup> on each side. Column 4, lines 45-55.

Wurster teaches all the features these claims except that a “gate roll coater” system is used (with application, inner and outer rolls), the coating speed of 1100 m/min or more and the peripheral speed of the inner/outer roll to the applicator roll.

However, ‘392 teaches that when making coated paper for offset printing by coating with pigment and adhesive, it is desirable to use a gate roll coater with an applicator roll, an inner roll and an outer roll. See the abstract. Furthermore, it is desirable for the inner and outer roll speed to be 50-80% of the applicator roll. See the abstract. The adhesive can include polyvinyl alcohol. Paragraph [0017]. The coating speed can be 1200 m/min. Paragraph [0026].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wurster to use a gate roll applicator system and coating speed of 1200 m/min, for example, as suggested by ‘392 with an expectation of providing a desirable and speedy transfer roll coating system because Wurster teaches that roller application systems can be used (not limited to Massey coaters) to apply a

coating system of pigments and adhesive to a paper surface and '392 teaches that a desirable roll coating system for applying a coating system of pigments and adhesive to a paper surface includes gate roll coaters and that such a gate roll coater would use an inner, outer and application roll and that desirable coating speeds for such systems would be 1200 m/min. Furthermore, it would have been desirable to use such a system with a peripheral speed ratio of the inner/outer roll to the applicator roll of 50-80% as suggested by '392 as a desirable speed ratio when using such a gate roll system.

### *Response to Arguments*

10. Applicant's arguments filed September 25, 2008 have been fully considered but they are not persuasive.

(A) As to the use of Wurster as to claims 19-23, applicant argues that Wurster does not disclose the claimed combination of steps as it does not reasonably disclose to one skilled in the art using a coating color containing 5 to 50 parts by weight of an adhesive and 0.1 to 10 parts by weight of an auxiliary consisting essentially of polyvinyl alcohol, since it uses higher amounts of polyvinyl alcohol in combination with a synthetic binder and also does not disclose starch in an amount of less than 2.0 parts by weight in addition to the adhesive and the auxiliary component of the claimed invention.

The Examiner has reviewed these arguments, however, the rejection is maintained. As shown at column 3, lines 30-40, a preferred system can have "plastic



binder" (which reads on the claimed adhesive in an amount of 3-10 wt%), a separately calculated PVA (polyvinyl alcohol) amount of 0-5 wt% (thus providing the PVA auxiliary to the plastic binder adhesive), and a separately calculated amount of starch of 0-10 wt%. Optimization of these ranges, all of which overlap with the ranges claimed, provides a suggested used of a coating color with the claimed amounts of material (in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)). The fact that Wurster does not provide an example of this specific combination of materials does not make it any less obvious to use the claimed combination, since as discussed in MPEP 2123, "Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971)."

(B) As to the combination of Wurster with Japan 11-050392 (claims 24 and 5-7); and Wurster with Hayasaka and Japan 11-050392, applicant argues that the combination of cited art does not provide the claimed method with the gate roll coater, coating speed and peripheral speed of inner and outer roll to applicator roll as claimed, as this combination provides specific advantageous effects, and that Hayasaka and '392 do not provide the deficiencies of Wurster. Applicant argues that Hayasaka does not provide the use of polyvinyl alcohol as claimed, and uses large amounts of starch, outside the claimed requirements, and provides no suggestion that the claimed coating color or color of Wurster can be applied at the claimed coating speed of the present

invention. As to '392, applicant further argues that it also provides a high starch coating (and indicates that this high starch is needed for gate roll coating), and it would not have been obvious to apply the claimed coating color at the claimed coating speed and claimed ratio of inner/outer roll speed to application roll speed. Applicant further argues that the features of claims 6 and 7 are also not provided by the cited art in combination with the features of claim 5.

The Examiner has reviewed these arguments, however, the rejection is maintained. As to the benefits of the exact claimed combination of ranges of materials used by applicant in combination with the use of the gate roll coating and speed, applicant has made no showing of unexpected benefits as to printability, blister resistance and gravure aptitude or other coating features in general, commensurate scope with the invention as claimed since, for example, none of the examples in the specification are indicated as being performed with a gate roll coater, nor are examples shown as to the precise claimed range of polyvinyl alcohol and starch. As discussed in MPEP 716.02(d), a showing of unexpected results must be commensurate in scope with the claims in order to rebut a prima facie case of obviousness. As to the polyvinyl alcohol amounts and coating weight, Wurster clearly provides amounts that overlap with what is claimed, and as discussed in the rejection above (and with regard to the use of Wurster as to claims 19-23 above), In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)); which prima facie case

obviousness has not been overcome by applicant's examples, as a showing of unexpected benefits commensurate in scope with the invention as claimed as not been made, as previously discussed. While an example may provide 2 wt% polyvinyl alcohol, the specification of Wurster provides the use of 1-4 wt%, for example (see column 2, lines 60-65) and even 0-5 wt% (see column 3, lines 35-40), which overlaps with the amount claimed, and as discussed in MPEP 2123, "Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971)." As to the use of the gate roll coater and claimed speeds, the Examiner has provided Hayasaka (in the first rejection of claims 5-7), as to the desirable use of these speeds. While Hayasaka is directed to coating a specific material, it also teaches desirable roll coating processes used in coating color of pigment and adhesive to a paper substrate of materials overlapping in coating weight. Since Wurster teaches using roll coating processes in general (column 4, line 25) (while Wurster describes the use of a Massey roll coater, it is not limited to such roll coating methods ("... roller application devices such as the Massey coater..." -column 4, lines 25-26, emphasis added)), one of ordinary skill in the art would clearly look to the art of coating materials with pigment and adhesive by roll coating to determine desirable roll coating processes and speeds to use. Therefore, Hayasaka is clearly an analogous and relevant piece of art to use. As to the use of '392, similarly, since Wurster teaches using roll coating processes in general (column 4, line 25), one of ordinary skill in the art would clearly look to the art of

coating materials with pigment and adhesive by roll coating to determine desirable roll coating processes and speeds to use. Therefore, since '392 is also directed to making coated paper for offset printing, with coating with pigment and adhesive, and teaches a desirable roll coating method, '392 is clearly an analogous and relevant piece of art to use. As to the use of starch/polyvinyl alcohol changing the expectation of speeds at which coating occurs, one of ordinary skill in the art would not expect that the amount of starch would change possible coating speeds, given that Wurster, for example, allows wide varieties of adhesive material (column 3, lines 10-40) including starch and polyvinyl alcohol or not, and instead discusses controlling the solids content of the slurry for application (column 4, lines 20-25). Note also that '392 also discusses that high speed for coating liquid can be provided by control of features other than starch or polyvinyl alcohol amounts in the coating. See paragraph [0010] -- controlling concentration or viscosity is also known. Thus, one of ordinary skill in the art would expect that the roll coating system of Haysaka and/or '392 would be successfully used with the coating material described by Wurster. As to claims 6 and 7, Wurster provides the suggestion of these features as discussed in the rejection above, at the features of claim 5 remain suggested for the reasons discussed above.

### *Conclusion*

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Katherine A. Bareford/  
Primary Examiner, Art Unit 1792